



## Phone Forum Discussion Summary

### April 23, 2004

**T**his document summarizes the discussion during the Labs21 phone forum, "Campus Planning—Stormwater Management."

**Q:** *How do you get around requirements for using oil/water separators in parking areas where pervious asphalt is used instead of regular asphalt?*

**A:** There is no way around these requirements. It is best to filter and treat stormwater onsite. The Low Impact Development (LID) Center is exploring a parking lot retrofit in Washington, DC, where they are looking at using permeable asphalt with an infiltration trench - a structural, engineered LID rather than a biological live soil mix. In another example, demonstration linear filter systems were installed in the ground in Prince Georges County, Maryland. This system captures water flow from the street.

Proprietary oil separators are discouraged in favor of infiltration.

**Q:** *Is it possible to use pervious asphalt in parking lots that are on a slope?*

**A:** A 2-3 percent degree of slope will work. The goal is to have an area where the water can stagnate enough to enter the pores and gravel. Too much slope will cause the water to pass too quickly.

**Q:** *What standing time is normally designed for the pooling effect? Pooling is frowned upon in my area because of the threat of West Nile Virus.*

**A:** It is important that the soil complex is site-appropriate so water does not stand for more than 24 hours. Constructing artificial soil profiles over impermeable liners helps to create the needed soil profile.

Pooling that was referred to in the presentation was under the pavement, and therefore not visible. Pooling in wet meadows is preferred because of the high volume of infiltration. Standing water removes certain pollutants, infiltration removes other pollutants. There are other treatment types available that are not so susceptible to the West Nile Virus.

**Q:** *Is there any plant material in the artificial soil profile?*

**A:** It is a living soil and it does have plant matter in it. The high performance soil is highly permeable with a substrate that is well drained. Water moves quickly, sometimes onto an impermeable surface. The water moves through a series of landscapes which subirrigates it on its way to the river.

**Q:** *Can you elaborate on the effectiveness natural plantings have in a retention pond?*

**A:** The difference between structural and non-structural (or low-tech) LID is the plant material. You either have 'engineered soil' in a structural LID, or a 'living soil' in a non-structural LID. In living soil, certain pollutants are filtered as they attach to a plant's root system and some pollutants are filtered through the soil structure during infiltration.



# Labs for the 21st Century

**Q:** *Is there a more economical alternative to using plant material?*

**A:** The Milwaukee project is seeded with native plantings, which are very low cost. It is possible to find an economical, albeit low-quality, plant type.

Shrubs may also be economical as is allowing perennials and seeded matter to naturally grow.